

*C2 D3 C4
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a contact tip structure secured to an end of the freestanding resilient elongate element.

- 1 95. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein
3 the core element has a diameter in the range of from 0.25 to 10 mils.

- 1 96. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein
3 the core element has a diameter in the range of from 0.5 to 3 mils.

- 1 97. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein
3 the core element has a length in the range of from 10 mils to 500 mils.

- 1 98. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a shell, and wherein the shell
3 has at least one layer which comprises a material which is selected for its
4 ability to provide mechanical properties selected from the group consisting
5 of spring properties, resiliency yield strength and compliance for the
6 resilient elongate element.

- 1 101. (New) The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a shell, and wherein the shell
3 has at least one layer which comprises a material selected from the group
4 consisting of nickel, iron, and cobalt.

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1 102. The interconnection component, according to claim 87 wherein:
2 said freestanding resilient elongate element comprises a shell, and wherein the shell
3 has at least one layer which comprises a material selected from the group
4 consisting of copper, nickel, cobalt, tin, boron, phosphorous, chromium,
5 tungsten, molybdenum, bismuth, indium, cesium, antimony, gold, silver,
6 rhodium, palladium, platinum, lead, and ruthenium.

1 103. The interconnection component, according to claim 87 wherein:
2 said freestanding resilient elongate element comprises a core element and a shell,
3 and wherein the core element comprises gold and the shell comprises a
4 material selected from the group consisting of nickel and cobalt.

1 106. An electronics assembly comprising:
2 a substrate;
3 a freestanding resilient elongate element having a first end secured to the substrate;
4 and a contact tip structure secured to the second end of the freestanding
5 resilient elongate element opposing the first end.

1 107. The electronics assembly, according to claim 106 further comprising:
2 a plurality of freestanding resilient elongate elements, each having a first end
3 secured to the substrate; and a plurality of contact tip structures, each
4 secured to a respective end of the respective freestanding resilient elongate
5 element opposing a respective first end thereof.

1 108. The electronics assembly, according to claim 106 wherein:
2 the contact tip structure is separately fabricated and mounted to the freestanding
3 resilient elongate element.

1 109. The electronic assembly, according to claim 108 wherein:
2 the freestanding resilient elongate element has a relatively flexible core element and
3 a layer on the relatively flexible core element.

1 110. The electronic assembly, according to claim 108 wherein:
2 the freestanding resilient elongate element has a relatively flexible core and a layer,
3 on the relatively flexible core element, of a material selected from the group
4 consisting of nickel, an alloy of nickel, cobalt, an alloy of cobalt and an
5 alloy of nickel and cobalt.

1 112. The electronics assembly, according to claim 106 wherein:
2 the freestanding resilient elongate element has a core element and a shell;
3 the core element is readily-shaped and comprises a material selected form the group
4 consisting of:
5 (a) gold, aluminum and copper with small amounts of beryllium,
6 cadmium, silicon and magnesium, and
7 (b) metals of the platinum group, and
8 (c) lead, tin, and indium.

1 113. The electronics assembly, according to claim 109 wherein:
2 the layer comprises a material which is selected for its ability to provide mechanical
3 properties selected from the group consisting of spring properties, resiliency
4 yield strength and compliance for the freestanding resilient elongate element.